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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/517,314	03/02/2000	Chih-Chen Cho	M4065.0223/P223	5039

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EXAMINER

KANG, DONGHEE

ART UNIT	PAPER NUMBER
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2811

DATE MAILED: 08/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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**Advisory Action**

Application No.

09/517,314

Applicant(s)

CHO, CHIH-CHEN

Examiner

Donghee Kang

Art Unit

2811

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 30 July 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.  
2. ☐ The proposed amendment(s) will not be entered because:  
(a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ they raise the issue of new matter (see Note below);  
(c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See attachment.  
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.  
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: 1,3-11,25,27-32 and 39.

Claim(s) withdrawn from consideration: 33-38.

8. ☐ The proposed drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.  
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.  
10. ☒ Other: See Continuation Sheet

Steven Loke  
Primary Examiner

*Steven Loke*

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Continuation of 2. NOTE: Newly added limitation, such as "formed of a single conductive material" in claims 11 & 25, would require further search and/or consideration..

Continuation of 10. Other: Examiner maintains the position that claim1 is clearly anticipated by the applied reference..

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***Response to Arguments***

Applicant argues that Chiang does not teach or suggest a "conductive plug ... formed of a single conductive material". This is not convincing. Chiang clearly teaches in Fig. 11 the conductive plug (100) formed of a single conductive material.

Applicant argues that there is no motivation to substitute a copper/barrier layer of Fig.9 with aluminum of Fig.11. This is incorrect. Aluminum of Fig.11 is substituted with copper/barrier of Fig.9. It is conventional to use copper with a barrier layer as a conductive interconnection layer instead of aluminum because copper has a lower resistivity than aluminum so as providing a higher speed. Thus it would have been obvious in the art at the time the invention was made to substitute aluminum of Chiang's device (Fig.11) with well-known copper/barrier layer taught by Chiang (Fig.9) since copper provides higher speed than aluminum and higher density in ICs. See Col.8, lines 55-67, Col.11, lines 12-48, & Col.14, line 65 – Col.15, line 3.

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